

WHAT IS CLAIMED IS:

1 Sub 1 1. A computer program product for a system including a processor
2 comprises:
3 a tangible memory coupled to the processor including:
4 code that directs the processor to determine an output resolution for an
5 output stream of data;
6 code that directs the processor to determine an output frame rate for the
7 output stream of data;
8 code that directs the processor to determine an output color depth for
9 the output stream of data;
10 code that directs the processor to retrieve a first frame of data, a second
11 frame of data, and a third frame of data from an input stream of data, the input stream of data
12 having an input resolution, an input frame rate, and an input color depth;
13 code that directs the processor to subsample the first frame of data, the
14 second frame of data, and the third frame of data to respectively form a first subsampled
15 frame of data, a second subsampled frame of data, and a third subsampled frame of data,
16 when the output resolution is lower than the input resolution;
17 code that directs the processor to remove the second subsampled frame
18 of data, when the output frame rate is lower than the input frame rate;
19 code that directs the processor to reduce color depth for the first
20 subsampled frame of data and the second subsampled frame of data to respectively form a
21 first reduced frame of data and a second reduced frame of data, when the output color depth
22 is smaller than the input color depth; and
23 code that directs the processor to convert the first reduced frame of
24 data and the second reduced frame of data into the output stream of data.

1 2. The computer program product of claim 1 wherein the tangible
2 memory further comprises:
3 code that directs the processor to determine an output bit rate for the output
4 stream of data; and
5 code that directs the processor to scale the first reduced frame of data and the
6 second reduced frame of data, in response to the output bit rate for the output stream of data

6 code configured to direct the processor to receive bandwidth requirements for
7 the output video stream, and an encoding format for the output video stream;
8 code configured to direct the processor to reduce bandwidth used by the
9 frames of data in response to the bandwidth requirements; and
10 code configured to direct a processor to encode bandwidth reduced frames of
11 data to form the output video stream in the encoding format;
12 wherein the codes reside on a tangible media.

1 17. The program product of claim 16
2 wherein bandwidth requirements comprise spatial bandwidth; and
3 wherein the code configured to direct the processor to reduce bandwidth used
4 by the frames of data comprises code configured to direct the processor to reduce spatial
5 bandwidth used by the frames of data in response to the spatial bandwidth requirements.

1 18. The program product of claim 17 wherein code configured to direct the
2 processor to reducing spatial bandwidth comprises code configured to direct the processor to
3 subsample the frames of data.

1 19. The program product of claim 16
2 wherein bandwidth requirements comprise color bandwidth; and
3 wherein the code configured to direct the processor to reduce bandwidth used
4 by the frames of data comprises code configured to direct the processor to reduce color
5 bandwidth used by the frames of data in response to the color bandwidth requirements.

1 20. The program product of claim 19 wherein code configured to direct the
2 processor to reducing color bandwidth comprises code configured to direct the processor to
3 reduce a bit depth of the frames of data.

1 21. The program product of claim 16
2 wherein bandwidth requirements comprise frame rate; and
3 wherein the code configured to direct the processor to reduce bandwidth used
4 by the frames of data comprises code configured to direct the processor to reduce frame rate
5 of the frames of data in response to the frame rate requirements.

